

AMENDMENTS TO THE DRAWINGS

Please make the changes indicated in Figures 1, 6 and 7 on the attached sheets labeled as "Annotated Sheets Showing Changes." The changes to these figures are explained in the "Remarks" section of this Amendment.

Further, a "New Sheet" is added which includes Figure 8.

REMARKS

In response to the Final Office Action mailed February 23, 2006, Applicants respectfully request reconsideration. To further the prosecution of this application, each of the issues raised in the Office Action is addressed herein.

Claims 1, 2, 4-6, 8-30, 32, 33, 35-38, 41-43, 45-61 and 63-67 were previously pending in this application. In response to the Office Action mailed November 1, 2005 in which a Restriction Requirement was made, Applicants elected, with traverse, the invention of Group I, namely claims 1, 2, 5, 6, 8-29, 30, 33, 35-38, 42, 43 and 45-61, for further prosecution. Within Group I, Applicants elected Species A, on which claims 8, 11-13, 45-50 and 57 are believed to read. In the present Final Office Action, the Restriction Requirement was made final, and claims 4, 9, 10, 14-16, 21-29, 32, 35, 38, 41, 43, 51-53, 56, 58, 59 and 63-67 were withdrawn. Applicants filed on May 12, 2006 a Petition from this final Restriction Requirement.

In view of the foregoing, claims 1, 2, 5, 6, 8, 11-13, 17-20, 30, 33, 36, 37, 42, 45-50, 54, 55, 57, 60 and 61 were pending for examination in the present Office Action, with claims 1, 30 and 37 being independent claims. Although dependent claims 9, 10, 14-16, 21-29, 35, 38, 43, 51-53, 56 and 58-59 are withdrawn from consideration, these claims are entitled to consideration upon the allowance of their respective base claims (1, 30 and 37), pursuant to MPEP §806.04(d).

In this response, claims 1 and 37 have been amended and new claims 85 and 86, drawn to the currently elected group and species, have been added. Accordingly, claims 1, 2, 5, 6, 8, 11-13, 17-20, 30, 33, 36, 37, 42, 45-50, 54, 55, 57, 60, 61, 85 and 86 are pending for examination, with claims 1, 30 and 37 being independent claims. No new matter has been added.

I. Objections to the Drawings

The drawings are objected to under 37 C.F.R. 1.83(a) as failing to show every feature specified in the claims. To address the objections, the following changes have been made:

- In Fig. 1, frames 802a-n have been shown as part of lighting program 20, and corresponding changes have been made at page 20 of the specification.

- In Fig. 1, non-light device 804 has been shown coupled to lighting controller 30, and corresponding changes have been made at page 14 of the specification.
- In Fig. 6, signals 808 and 810, which respectively alter the rate of progression of the lighting sequence and adjust the intensity, color, or other characteristic of the output, have been shown. Corresponding changes have been made at pages 23-24 of the specification.
- In Fig. 7, lighting programs 806a and 806b (i.e., multiple lighting programs) have been shown as stored in storage device 620, and corresponding changes have been made at pages 20 and 27 of the specification.
- Fig. 8 has been added, and corresponding changes have been made at pages 5 and 17 of the specification.

In addition, Applicants note that Fig. 6 shows a playback device 31 without a display. No new matter has been added.

In view of the foregoing, Applicants submit that the drawings, as amended, show every feature of the invention specified in the claims and respectfully request that the objections to the drawings be withdrawn.

II. Rejections of the Claims Under 35 U.S.C. §112

Claims 1, 2, 5, 6, 8, 11-13, 17-20, 37, 42, 45-50, 54, 55, 57, 60 and 61 are rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. Applicants respectfully traverse these rejections. The Office Action alleges that there is insufficient antecedent basis in claims 1 and 37 for the limitation “the final data stream represented by the plurality of frames.” Applicants disagree; however, in an effort to address any concerns the Examiner may have regarding the language recited in claims 1 and 37 and thereby advance prosecution, claims 1 and 37 have been amended to delete the phrase “represented by the plurality of frames.” Accordingly, withdrawal of these rejections is respectfully requested.

III. Rejections of the Claims Under 35 U.S.C. §102

Claims 1, 2, 5, 6, 8, 11-13, 17-20, 30, 33, 36, 37, 42, 45-50, 54 and 55 (including independent claims 1, 30 and 37) were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 5,945,993 (Fleischmann). Claims 1, 2, 5, 6, 8, 11-13, 17-20, 30, 33, 36, 37, 42, 45-50, 54 and 55 (including independent claims 1, 30 and 37) were rejected under 35 U.S.C. §102(e) as allegedly being anticipated by U.S. Patent No. 6,466,234 (Pyle). Claims 30, 33 and 36 (including independent claim 30) were rejected under 35 U.S.C. §102(b) as allegedly being anticipated by U.S. Patent No. 5,769,527 (Taylor). Applicants respectfully traverse these rejections.

a. Applicants' Independent Claim 1

Applicants' claim 1 is directed to a method for executing a lighting program to control a plurality of lights, the lighting program defining a sequence of states for the plurality of lights. The method comprises acts of: (A) transferring the lighting program from a first device on which the lighting program was created to at least one computer readable medium and storing the lighting program on the computer readable medium, the lighting program being transferred in a data format having a plurality of frames, each one of the plurality of frames corresponding to one state in the sequence of states for the plurality of lights, and the lighting program being stored by storing a specific frame for each of the states, the data format representing a final data stream capable of directly controlling the plurality of lights; (B) coupling the computer readable medium to a second device that is not coupled to the first device; (C) coupling the second device to the plurality of lights; and (D) executing the lighting program on the second device by reading the plurality of frames from the computer readable medium and passing the final data stream to the plurality of lights to control the plurality of lights to execute the sequence.

Overview of one Aspect of the Invention

Applicants provide below an overview of one aspect of the present invention to assist the Examiner in appreciating possible applications of the invention recited in claim 1. The overview is provided merely to assist the Examiner's understanding, and is not intended to characterize claim 1

or any other claim. The Examiner is encouraged to examine each claim on the merits based on the specific language recited in the claims.

Claim 1 has been amended to recite “coupling the computer readable medium to a second device *that is not coupled to the first device*” (newly added portion is italicized). The added language is supported in the specification as filed, e.g., at page 17, lines 5-10.

As set forth in Applicants’ specification at pages 16-17, Applicants have appreciated that in many instances, it may be desirable to author a lighting program on one device (e.g., a general purpose computer), but play it back on a different device. For example, a retail store may desire to author a lighting program that can then be played back at multiple retail locations. Furthermore, there may also be situations in which lighting displays are mobile, and accordingly there may not always be ready access to the Internet or some other communication medium for connecting to the device on which the program is authored. Therefore, it may be desirable to author a lighting program on one device as described above, and then transfer the program to a different device (e.g., a portable playback device) which plays back the lighting program and controls a lighting display.

Rejections of Claim 1

Claim 1 is rejected as allegedly being anticipated by Fleischmann and Pyle. Claim 1 distinguishes over each of Fleischmann and Pyle for a number of reasons. Some of these reasons were set out in Applicants’ Amendment dated August 8, 2005, which is incorporated herein by reference. In addition, neither Fleischmann nor Pyle teaches or suggests “transferring the lighting program from a first device on which the lighting program was created to at least one computer readable medium,” “coupling the computer readable medium to a second device that is not coupled to the first device” and “executing the lighting program on the second device,” as recited in claim 1. Rather, as explained in detail below, the alleged “lighting program” in each of Fleischmann and Pyle (which Applicants respectfully assert is not a lighting program as claimed) is created and executed *on the same device or on devices that are coupled*.

1. Fleischmann

Fleischmann is directed to a lighting control system 10 for controlling lighting loads 12 in a facility such as an office building (col. 2, lines 61-63). As shown in Fig. 1, the lighting loads 12 are coupled to a server 26 via relays 14, a bus 16, and an interface module 28. The server 26 generates digital commands CMD, which signal the lighting loads 12 to assume certain states, in response to first and second lighting control requests LR1 and LR2 received from virtual light switch 20 and web browser 22, respectively. First and second lighting control requests LR1 and LR2 identify states (e.g., lighting intensities) of specific lighting loads based on user inputs received. In the case of web browser 22, inputs are received using an image map and a lighting control form, such as shown in Fig. 2. In the case of virtual light switch 20, inputs are received using a control panel such as that shown in Fig. 3.

The Office Action does not specify which commands (e.g., LR1/LR2, CMD, ARC) are believed to correspond to the “lighting program” claimed, nor which act in Fleischmann is believed to correspond to the act of transferring the lighting program from a first device on which the lighting program was created to at least one computer readable medium. However, it is clear from Fig. 1 and the discussion provided above that Fleischmann does not create any of these commands on a first device that is not coupled to a device on which the commands are “executed.” In particular, each portion of Fleischmann’s lighting control system 10 is coupled to another portion at all times during normal operation.

In view of the foregoing, Fleischmann does not disclose or suggest “transferring the lighting program from a first device on which the lighting program was created to at least one computer readable medium,” “coupling the computer readable medium to a second device that is not coupled to the first device” and “executing the lighting program on the second device,” as recited in claim 1.

In view of the foregoing, claim 1 patentably distinguishes over Fleischmann and is in condition for allowance. Therefore the rejection of this claim over Fleischmann should be withdrawn.

Claims 2, 5, 6, and 8-29 depend from claim 1 and are allowable over Fleischmann at least based on their dependency.

2. Pyle

Pyle is directed to a lighting system that controls the lighting of an environment (col. 2, lines 27-28). In particular, the lighting system allows a user to select a visual indication of a scene and causes the lights of the circuits of that scene to be set to a target state (col. 4, lines 24-27). Fig. 6 of Pyle illustrates the architecture of the lighting system. The lighting system is implemented using a single computer or various interconnected computers (col. 5, lines 58-62).

The Office Action suggests that the “lighting program” of claim 1 comprises one of the scene descriptions shown in the scene description table of Pyle’s Fig. 3 (Office Action at page 10). The scene description table is stored in the scene description file 602 of Pyle’s Fig. 6 (col. 5, lines 14-16). The lighting controller 607 of Fig. 6 places the circuits of a scene in a target state (col. 5, lines 7-8). The lighting gateway 601 serves as an interface between the scene description file 602 and the lighting controller 607 by retrieving circuit information for a scene from the description file 602 and instructing the lighting controller to place the circuits of that scene in the target state (col. 6, lines 1-8). If the interface between the scene description file 602 and the lighting controller 607 were severed, Pyle’s lighting system could no longer operate.

In view of the foregoing, Pyle does not disclose or suggest “transferring the lighting program from a first device on which the lighting program was created to at least one computer readable medium,” “coupling the computer readable medium to a second device that is not coupled to the first device” and “executing the lighting program on the second device,” as recited in claim 1.

In view of the foregoing, claim 1 patentably distinguishes over Pyle. Therefore the rejection of this claim over Pyle should be withdrawn.

Claims 2, 5, 6, and 8-29 depend from claim 1 and are allowable over Pyle at least based on their dependency.

b. Applicants’ Independent Claim 30

Applicants’ claim 30 is directed to a computer readable medium encoded with a lighting program that, when executed, controls a plurality of lights and defines a sequence of states for the plurality of lights. The lighting program is encoded in a data format that represents a final data

stream capable of directly controlling the plurality of lights, the data format having a plurality of frames, each one of the plurality of frames corresponding to one state in the sequence of states for the plurality of lights. Encoding the computer readable medium includes storing a specific frame for each of the states, and the data format represents a final data stream capable of directly controlling the plurality of lights to execute the sequence.

Claim 30 was rejected as allegedly being anticipated by Fleischmann, Pyle and Taylor. These rejections are respectfully traversed for the reasons explained below in connection with each reference.

1. Fleischmann

First, Fleischmann does not disclose or suggest a “lighting program... encoded in a data format that represents a final data stream capable of directly controlling the plurality of lights,” as recited in claim 30. In Fleischmann, analog relay commands ARC control the relays 14 to turn on and adjust the brightness of associated lighting loads 12 (col. 3, lines 37-42). These analog relay commands are generated by the interface module 28 by translating the digital commands CMD from their proprietary format (col. 3, lines 32-37). These analog relay commands, which are the only commands disclosed that are arguably capable of directly controlling the lighting loads 12, *are not encoded in the interface module 28 or elsewhere*. Thus, Fleischmann does not disclose or suggest a “lighting program... encoded in a data format that represents a final data stream capable of directly controlling the plurality of lights,” as recited in claim 30.

Second, Fleischmann does not disclose or suggest a “lighting program... encoded in a data format... having a plurality of frames,” as recited in claim 30. The Examiner alleges that Fleischmann discloses a lighting program, because Fleischmann teaches that some conventional lighting control systems include the ability to turn lights on or off at specific times (Office Action at page 11, citing col. 1, lines 10-20 and col. 9, lines 18-34 of Fleischmann). However, even if the lighting system of Fleischmann had this capability, such a “program” would not be encoded in a data format having a *plurality* of frames. Rather, only a single frame would be required (e.g., a frame sent by the server at a particular time specifying that a particular light should be turned off). It is notable that although the Office Action cites col. 3, lines 7-50 as purportedly teaching a

plurality of frames being encoded, the cited passage does not mention a plurality of frames – or commands – being encoded as a program. Rather, the passage merely describes singular commands being issued by various portions of the lighting system. Thus, Fleischmann does not disclose or suggest a lighting program encoded in a data format having a plurality of frames, as recited in claim 30.

In view of the foregoing, claim 30 patentably distinguishes over Fleischmann and is in condition for allowance. Therefore the rejection of this claim over Fleischmann should be withdrawn.

Claims 33, 35 and 36 depend from claim 30 and are allowable over Fleischmann at least based on their dependency.

2. Pyle

First, Pyle does not disclose or suggest a “lighting program... encoded in a data format that represents a final data stream capable of directly controlling the plurality of lights,” as recited in claim 30. In Pyle, a lighting controller 607 provides the interface between the lighting system and the switching mechanism for the lights (col. 5, line 66 – col. 6, line 1). Pyle is *completely silent* with respect to the signals generated by the lighting controller 607 to control the lights, and makes no suggestion that the format of such signals is the same as the format of data that is encoded as a “lighting program.” Although the Office Action cites col. 4, lines 10-29 as purportedly teaching a lighting program encoded in a data format that represents a final data stream capable of directly controlling the plurality of lights, the cited passage merely describes how a display 100 may be used by a user to control the lighting system, and not how lights of the lighting system are “directly” controlled or how any purported lighting program is encoded. Thus, Pyle does not disclose or suggest a “lighting program... encoded in a data format that represents a final data stream capable of directly controlling the plurality of lights,” as recited in claim 30.

Second, Pyle does not disclose or suggest a “lighting program... encoded in a data format... having a plurality of frames,” as recited in claim 30. The Examiner alleges that Pyle discloses a lighting program because Pyle teaches that each scene has an associated change time indicating the time required to transition to the target state (Office Action at page 10, citing col. 5, lines 7-10 of

Pyle). However, this “change time” does not suggest that a plurality of frames would be required to implement any of the scenes identified in the scene description table (Fig. 3). Although Pyle does not describe the nature of signals that are used to control the lights, there is no suggestion that an additional command would be sent to a light to indicate the time required for the lights to change to a target state. Thus, Pyle does not disclose or suggest a lighting program encoded in a data format having a plurality of frames, as recited in claim 30.

In view of the foregoing, claim 30 patentably distinguishes over Pyle and is in condition for allowance. Therefore the rejection of this claim over Pyle should be withdrawn.

Claims 33, 35 and 36 depend from claim 30 and are allowable over Pyle at least based on their dependency.

3. Taylor

Taylor does not disclose or suggest a “lighting program... encoded in a data format... having a plurality of frames,” as recited in claim 30. The Examiner alleges that Taylor discloses a lighting program encoded in a data format having a plurality of frames because “Taylor teaches an RS232 data format” (Office Action at page 11, citing col. 48, lines 25-44 of Taylor). RS-232 is an interface for connecting serial devices, and has numerous possible applications. Thus, the mere fact that an RS-232 interface is used in Taylor does not suggest that Taylor discloses a “lighting program... encoded in a data format... having a plurality of frames.” The rest of the cited passage discusses that a personal computer 560 can be used for the development, display and manipulation of cue data and status reports. Likewise, this does not suggest that Taylor discloses a lighting program encoded in a data format having a plurality of frames.

Other portions of Taylor clarify that Taylor *does not* encode any lighting program in a data format having a plurality of frames. As Taylor explains, the operation of the system 20 is controlled via a control console 24 used to manually set the lighting effects of the system 20 (col. 5, lines 43-48). A complete performance may require the setting of several hundred cues to provide desired lighting effects (col. 5, lines 66-67). Thus, in the system of Taylor, each cue must be separately activated; no program is employed to generate a plurality of cues. Accordingly, Taylor does not

disclose or suggest a lighting program encoded in a data format having a plurality of frames, as recited in claim 30.

In view of the foregoing, claim 30 patentably distinguishes over Taylor and is in condition for allowance. Therefore the rejection of this claim over Taylor should be withdrawn.

Claims 33, 35 and 36 depend from claim 30 and are allowable over Taylor at least based on their dependency.

c. Applicants' Independent Claim 37

Applicants' claim 37 is directed to an apparatus for executing a lighting program to control a plurality of lights, the lighting program defining a sequence of states for the plurality of lights. The apparatus comprises at least one storage medium to store the lighting program in a data format having a plurality of frames, each one of the plurality of frames corresponding to one state in the sequence of states for the plurality of lights, and the lighting program being stored by storing a specific frame for each of the states, the data format representing a final data stream capable of directly controlling the plurality of lights. The apparatus further comprises at least one controller that executes the lighting program by reading the plurality of frames from the at least one storage medium and passing the final data stream to the plurality of lights to control the plurality of lights.

Claim 37 was rejected as allegedly being anticipated by Fleischmann and Pyle. These rejections are respectfully traversed for the reasons explained below in connection with each reference.

1. Fleischmann

For reasons similar to those discussed above in connection with claim 30, Fleischmann does not disclose or suggest a "lighting program in a data format... representing a final data stream capable of directly controlling the plurality of lights," as recited in claim 37.

In addition, for reasons similar to those discussed above in connection with claim 30, Fleischmann does not disclose or suggest a "lighting program in a data format having a plurality of frames," as recited in claim 37.

In view of the foregoing, claim 37 patentably distinguishes over Fleischmann. Therefore the rejection of this claim over Fleischmann should be withdrawn.

Claims 38, 42, 43, 45-61 depend from claim 37 and are allowable over Fleischmann at least based on their dependency.

2. Pyle

For reasons similar to those discussed above in connection with claim 30, Pyle does not disclose or suggest a "lighting program in a data format... representing a final data stream capable of directly controlling the plurality of lights," as recited in claim 37.

In addition, for reasons similar to those discussed above in connection with claim 30, Pyle does not disclose or suggest a "lighting program in a data format having a plurality of frames," as recited in claim 37.

In view of the foregoing, claim 37 patentably distinguishes over Pyle. Therefore the rejection of this claim over Pyle should be withdrawn.

Claims 38, 42, 43, 45-61 depend from claim 37 and are allowable over Pyle at least based on their dependency.

IV. Rejections of Claims under 35 U.S.C. §103

Claims 57, 60 and 61 were rejected under 35 U.S.C. §103(a) as allegedly being obvious over Fleischmann or Pyle in view of Taylor. Applicants respectfully traverse these rejections. In any case, these rejections are believed to be moot in view of the remarks above, as each of these claims depends from a base claim that is believed to be in allowable condition.

V. Newly Added Claims

Dependent claims 85 and 86 have been added to more fully define Applicants' contribution to the art. Both claims are drawn to the elected group and species (i.e., Group I, species A) and are supported in the specification as filed, e.g., at page 17, lines 5-10.

Claim 85 recites "the computer readable medium of claim 30, wherein the lighting program is created on a first device, and wherein the computer readable medium is not coupled to the first

device when the lighting program is executed.” Claim 85 is allowable at least based on its dependency from claim 30, and further because none of the references cited in connection with claim 30 teaches or suggests creating a lighting program on a device that is not coupled to a device on which the lighting program is executed.

Claim 86 recites “the apparatus of claim 37, wherein the lighting program is created on a first device, and wherein the apparatus is not coupled to the first device when the lighting program is executed.” Claim 86 is allowable at least based on its dependency from claim 37, and further because none of the references cited in connection with claim 37 teaches or suggests creating a lighting program on a device that is not coupled to a device on which the lighting program is executed.

VI. General Comments on Dependent Claims

Since each of the dependent claims depends from a base claim that is believed to be in condition for allowance, Applicants believe that it is unnecessary at this time to argue the allowability of each of the dependent claims individually. However, Applicants do not necessarily concur with the interpretation of the dependent claims as set forth in the Office Action, nor do Applicants concur that the basis for the rejection of any of the dependent claims is proper. Therefore, Applicants reserve the right to specifically address the patentability of the dependent claims in the future, if deemed necessary.

Conclusion

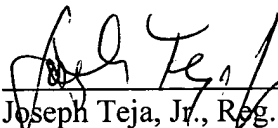
It is respectfully believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment set forth in the Office Action does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Furthermore, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify any concession of unpatentability of the claim prior to its amendment.

In view of the foregoing amendments and remarks, this application should now be in condition for allowance. A notice to this effect is respectfully requested. If the Examiner believes, after this amendment, that the application is not in condition for allowance, the Examiner is requested to call the Applicants' representative at the telephone number indicated below to discuss any outstanding issues relating to the allowability of the application.

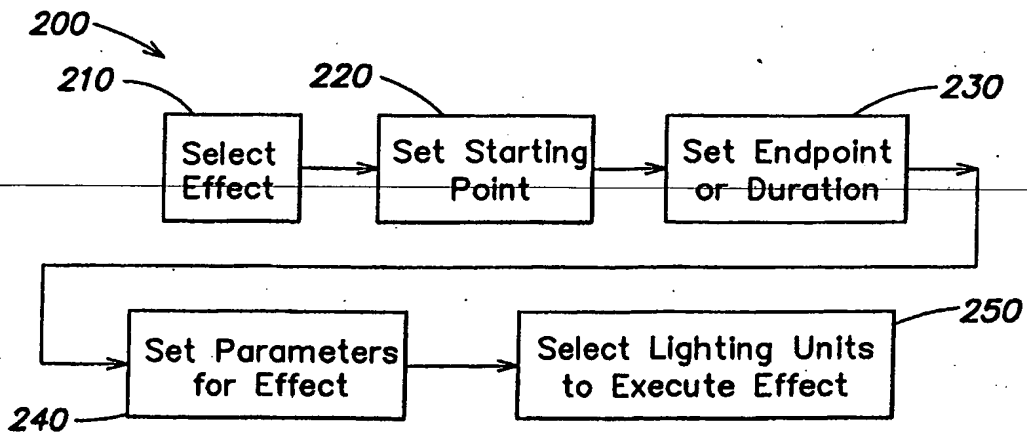
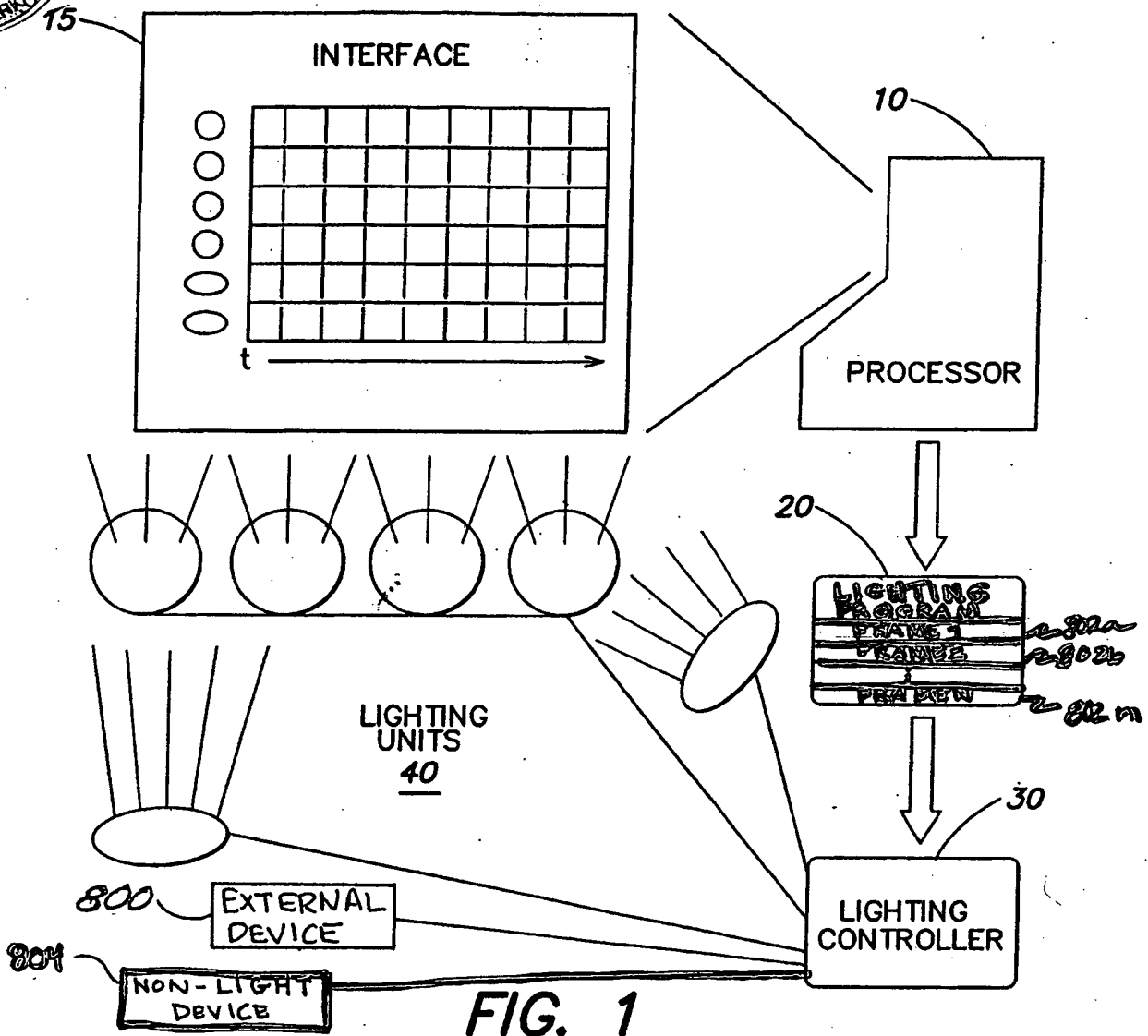
If this response is not considered timely filed and if a request for an extension of time is otherwise absent, Applicants hereby request any necessary extension of time. If there is a fee occasioned by this response, including an extension fee, that is not covered by an enclosed check, please charge any deficiency to Deposit Account No. 23/2825.

Respectfully submitted,
Michael K. Blackwell, et al., *Applicants*

By:


Joseph Teja, Jr., Reg. No. 45,157
Melissa A. Beede, Reg. No. 54,986
Wolf, Greenfield & Sacks, P.C.
600 Atlantic Avenue
Boston, Massachusetts 02210-2211
Telephone: (617) 720-3500

Attorney Docket No.: C1104.70001US00
Date: May 22, 2006



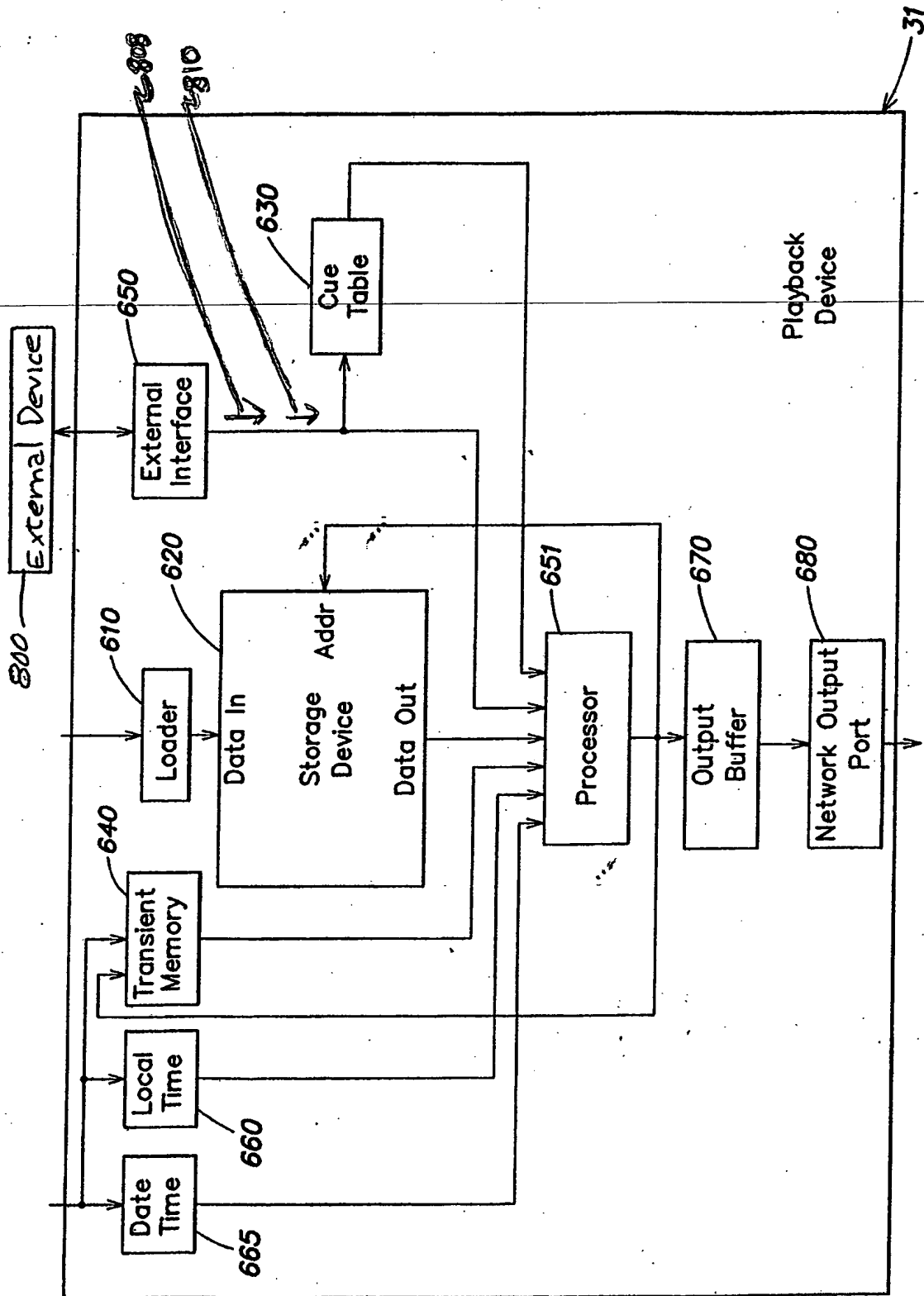


FIG. 6

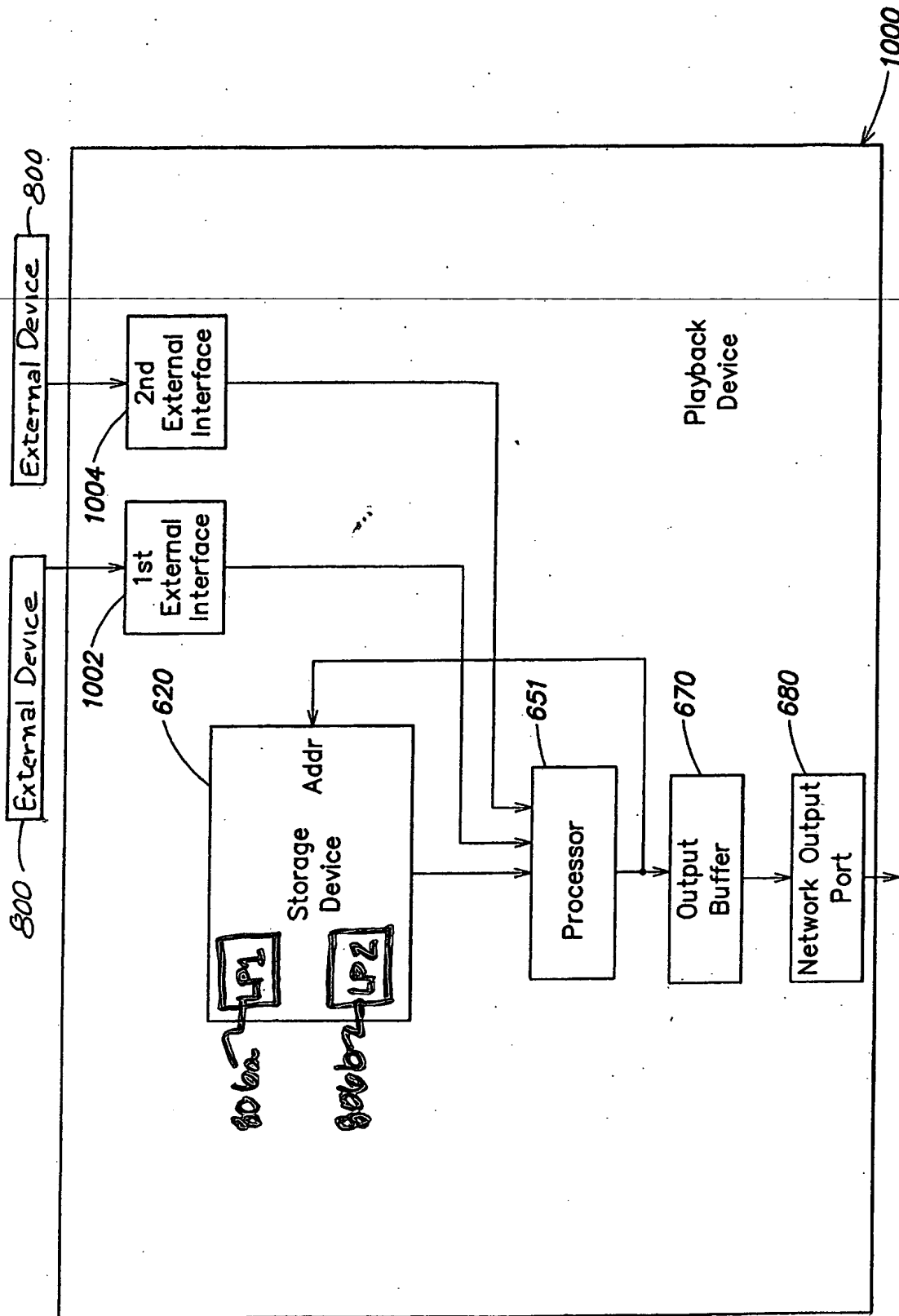


FIG. 7

**This Page is Inserted by IFW Indexing and Scanning
Operations and is not part of the Official Record**

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images include but are not limited to the items checked:

☒ **BLACK BORDERS**

☐ **IMAGE CUT OFF AT TOP, BOTTOM OR SIDES**

☐ **FADED TEXT OR DRAWING**

☐ **BLURRED OR ILLEGIBLE TEXT OR DRAWING**

☐ **SKEWED/SLANTED IMAGES**

☐ **COLOR OR BLACK AND WHITE PHOTOGRAPHS**

☐ **GRAY SCALE DOCUMENTS**

☐ **LINES OR MARKS ON ORIGINAL DOCUMENT**

☐ **REFERENCE(S) OR EXHIBIT(S) SUBMITTED ARE POOR QUALITY**

☐ **OTHER: _____**

IMAGES ARE BEST AVAILABLE COPY.

As rescanning these documents will not correct the image problems checked, please do not report these problems to the IFW Image Problem Mailbox.